

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A fuel cell assembly comprising:
a fluid flow field plate having a plurality of field plate channels formed in ~~the a~~ surface thereof ~~and extending that extend~~ across the surface of ~~the plate~~ in a predetermined pattern;
a distribution foil having a plurality of distribution foil channels formed in a surface thereof and extending from a first edge of the distribution foil to a second edge of the distribution foil, the plurality of distribution foil channels terminating at the second edge at positions substantially coincident with respective ones of the plurality of field plate channels; and
a cover foil extending over the distribution foil to enclose the distribution foil channels and thereby form conduits for water between the distribution foil and the cover foil ~~two foils~~.

2. (Currently Amended) The fuel cell assembly of claim 1, wherein the distribution foil comprises ~~includes~~:
a first series of channels extending to the first edge of the distribution foil;

an array of channels, in communication with the first series of channels, forming a pressure distribution gallery; and

a second series of channels, in communication with the array of channels, extending to the second edge of the distribution foil.

3. (Currently Amended) The fuel cell assembly of claim 1, wherein the distribution foil channels terminate at the second edge of the distribution foil at a plurality of convergence structures adapted to focus water flow into ~~a respective channel~~ corresponding field plate channels in the fluid flow field plate.

4. (Previously Presented) The fuel cell assembly of claim 3, wherein each convergence structure comprises a recess in the second edge of the distribution foil.

5. (Previously Presented) The fuel cell assembly of claim 4, wherein the recess comprises an arcuate cut out in the second edge of the distribution foil.

6. (Currently Amended) The fuel cell assembly of claim 1, wherein the distribution foil channels terminate at the first edge of the distribution foil at at least one supply manifold aperture in the fluid flow field plate.

7. (Previously Presented) The fuel cell assembly of claim 1, wherein the distribution foil is formed from stainless steel.

8. (Previously Presented) The fuel cell assembly of claim 1, wherein the distribution foil channels are chemically etched.

9. (Currently Amended) A fuel cell assembly comprising:

a fluid flow field plate having a plurality of field plate channels formed in ~~the a~~ surface thereof ~~and extending that extend~~ across the surface ~~of the fluid flow field plate~~ in a predetermined pattern;

a distribution foil having a plurality of distribution foil channels formed in a surface thereof, the distribution foil channels each extending from first positions proximal to₁ or at a first edge of₁ the distribution foil to second positions proximal to₁ or at a second edge of₁ the distribution foil, the distribution foil channels terminating at the second positions substantially coincident with corresponding ~~respective ones of the underlying~~ field plate channels; and

a cover foil co-extensive with a substantial part of the distribution foil to enclose the distribution foil channels over at least part of ~~their length~~ lengths of the distribution foil channels between the first and second positions and thereby form conduits for water between the distribution foil and the cover foil ~~two foils~~.

10. (Currently Amended) The fuel cell assembly of claim 9, wherein the distribution foil comprises:

a first series of channels extending to the first positions proximal to₁ or at the first edge of₁ the distribution foil;

an array of channels, in communication with the first series of channels, forming a pressure distribution gallery; and

a second series of channels, in communication with the array of channels, extending to the second positions proximal to₂ or at the second edge of₂ the distribution foil.

11. (Currently Amended) The fuel cell assembly of claim 9, wherein the distribution foil channels terminate at the second positions at a plurality of convergence structures adapted to focus water flow into corresponding field plate channels ~~a respective channel~~ in the fluid flow field plate.

12. (Previously Presented) The fuel cell assembly of claim 1, wherein the distribution foil channels terminate at the first positions at at least one supply manifold aperture in the fluid flow field plate.

13. (Currently Amended) The fuel cell assembly of claim 1, ~~further comprising~~ wherein the fluid flow field plate is part of a series of fluid flow field plates, acting configured to act as cathodes and/or anodes, the series of fluid flow field plates being formed in a stack ~~with a respective~~ and having a membrane-electrode assembly adjacent thereto.

14. (Currently Amended) The fuel cell assembly of claim 13, wherein each cathode-configured fluid flow field plate has a ~~respective one of said~~ distribution foil ~~foils~~ and ~~said a cover foils foil~~ foil interposed between the cathode-configured fluid flow field plate and the an adjacent membrane-electrode assembly.

15. (Currently Amended) A fuel cell assembly comprising:
a fluid flow field plate having a plurality of field plate channels formed in ~~the a~~ surface thereof ~~and extending that extend~~ across the surface of ~~the field plate~~ in a predetermined pattern;
an adjacent membrane-electrode assembly (MEA) in contact with the fluid flow field plate over an active area of the MEA; and
a distribution membrane interposed between the fluid flow field plate and the MEA, the distribution membrane having a plurality of water conduits extending therethrough between first positions proximal to, or at a first edge of, the distribution membrane to second positions proximal to, or at a second edge of, the distribution membrane, the plurality of water conduits terminating at the second positions substantially coincident with ~~respective ones of the~~ corresponding field plate channels.

16. (Currently Amended) The fuel cell assembly of claim 15, wherein the distribution membrane comprises a gasket of the fuel cell assembly.

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17. (Currently Amended) The fuel cell assembly of claim 16, wherein the plurality of water conduits are formed as channels in a surface of ~~the~~ a gasket adjacent to the fluid flow field plate.

18. (Currently Amended) The fuel cell assembly of claim 15, wherein the distribution membrane ~~is formed as~~ has a multilayer structure.

19. (Cancelled)